Daniel Martí Casanova

Game programmer

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Passionate game developer with experience working on various small projects, in research and as a software developer building interactive experiences for museums using game development tools.

Experienced in different advanced disciplines related to video game development and simulation. Self-motivated, with a good track record of working well with others, and an avid learner. Spanish and Catalan native speaker and proficient in English (C1).

SKILLS

- **Programming languages**: C++, C#, .NET (WPF and Forms), Python, JavaScript.
- **Game Development Frameworks/Engines and tools:** Unity, Unreal Engine (Blueprints and C++), Godot, Visual Studio.
- **Physics programming:** advanced simulations, collisions, rigid body and soft body dynamics, spatial partition.
- **Graphics programming:** shaders, materials, GLSL, HLSL, OpenGL.
- **Gameplay programming:** gameplay systems and logic, player controllers, puzzle mechanics, and combat systems.
- **Development Practices & Patterns:** Git, design patterns, SOLID, OOP, DOP, multithreading.
- **Project Management & Collaboration:** Agile methodologies, Jira, SCRUM, UML, Trello, great communication skills..
- **Graphics & Content Creation Tools:** Blender, 3ds Max, Photoshop.
- **Miscellaneous**: SQL, basic knowledge of GPGPU with CUDA, proven artistic skills (proportion, color, composition...).

EXPERIENCE

SNGULAR Studios - Junior Software Developer

MARCH 2023 - PRESENT

- Contributed to real time interactive museum experiences built using game engines like Unity and Unreal.
- Interacted directly with designers to bring their concepts and ideas to life.
- Adapted to evolving project requirements and tight deadlines by implementing code with a focus on reusability and flexibility.
- Independently developed an internal .NET application that centralizes management and monitoring of interactive museum exhibits worldwide, enhancing operational efficiency through unified exhibit performance monitoring and streamlined troubleshooting.

Rey Juan Carlos University, Madrid - Physics Research Assistant

OCTOBER 2021 - AUGUST 2022

- Worked on a state of the art machine learning project.
- Developed an efficient differentiable physics simulation engine in C++ intended for different game engines such as Unity or Unreal.

Personal projects

Collaborated with teams on various academic projects, work-related tasks, and personal projects. Competed in multiple game jams, where I consistently delivered high-quality projects within deadlines.

- **We're In The Same Boat:** a puzzle game for Android published in the PlayStore.

EDUCATION

Rey Juan Carlos University, Madrid - Bachelor's Degree in Video Game design and development

SEPTEMBER 2018 - NOVEMBER 2022

Obtained multiple distinctions in subjects about OOP in C++ and Javascript, 3D physics simulation, and multiplayer web games using Javascript and Java for backend.

- "*Premio extraordinario de fin de carrera*": award for the highest GPA among the graduates in the class of 2023.
- Thesis: *Framework for inverse animation editing based on differentiable simulation*.